

WHAT IS CLAIMED IS:

1. A process for preparing an RPET polymer blend component, including an RPET carrier and a specialty additive, comprising:

5 providing a quantity of RPET particles having an average mean particle size from about 500 microns to about 5 microns;

adding a specialty additive to the RPET particles; and

10 mixing the RPET particles and specialty additive, to prepare a homogeneous blend of RPET carrier and specialty additive.

2. The process for preparing an RPET polymer blend component according to Claim 1, wherein the average mean particle size of the RPET particles ranges from about 15 300 microns to about 15 microns.

3. The process for preparing an RPET polymer blend component according to Claim 1, wherein the specialty additive is selected from the group consisting of colorants, toners, dyes, ultraviolet blocking agents, oxygen scavengers, gas diffusion barrier agents, antioxidants, acetylaldehyde reduction additives, slip agents, lubricants, fillers, and mixtures thereof.

4. A process for preparing an RPET polymer blend component, including an RPET carrier and a specialty additive, comprising:

5 providing RPET particles having an average mean particle size from about 500 microns to about 5 microns;

10 adding a specialty additive to the RPET particles, said specialty additive selected from the group consisting of colorants, toners, dyes, ultraviolet blocking agents, oxygen scavengers, gas diffusion barrier agents, antioxidants, acetylaldehyde reduction additives, slip agents, lubricants, fillers, and mixtures thereof; and
15 mixing the RPET particles and specialty additive, to prepare a homogeneous blend of RPET carrier and specialty additive.

20 5. The process for preparing an RPET polymer blend component according to Claim 4, wherein the average mean particle size of the RPET particles ranges from about 300 microns to about 15 microns.

6. A process for preparing an RPET polymer blend component, including an RPET carrier and a specialty additive, comprising:

- providing a quantity of recyclable
5 polyethylene terephthalate;
- comminuting the polyethylene terephthalate to
prepare RPET particles having an average mean
particle size from about 500 microns to about 5
microns;
- 10 adding a specialty additive to the RPET
particles; and
- mixing the RPET particles and specialty
additive, to prepare a homogeneous blend of RPET
carrier and specialty additive.

15 7. The process for preparing an RPET polymer blend component according to Claim 6, wherein the average mean particle size of the RPET particles ranges from about 300 microns to about 15 microns.

20 8. The process for preparing an RPET polymer blend component according to Claim 6, wherein the specialty additive is selected from the group consisting of colorants, toners, dyes, ultraviolet blocking agents,
25 oxygen scavengers, gas diffusion barrier agents, antioxidants, acetylaldehyde reduction additives, slip agents, lubricants, fillers, and mixtures thereof.

9. A process for preparing an RPET polymer blend component, including an RPET carrier and a specialty additive, comprising:

- providing a quantity of recyclable polyethylene terephthalate;
- 5 comminuting the polyethylene terephthalate to prepare RPET particles having an average mean particle size from about 500 microns to about 5 microns;
- 10 adding a specialty additive to the RPET particles, said specialty additive selected from the group consisting of colorants, toners, dyes, ultraviolet blocking agents, oxygen scavengers, gas diffusion barrier agents, antioxidants, acetylaldehyde reduction additives, slip agents, lubricants, fillers, and mixtures thereof; and
- 15 mixing the RPET particles and specialty additive, to prepare a homogeneous blend of RPET carrier and specialty additive.

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10. The process for preparing an RPET polymer blend component according to Claim 9, wherein the average mean particle size of the RPET particles ranges from about 300 microns to about 15 microns.

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